



I. Excessive Pressure Drop Across Filter Bags

The differential pressure gauge or manometer on your dust collector should read 6" w.g. or less. Higher readings and/or steadily increasing readings are an indication that the main air flow through the dust collector may be restricted, and a potential process problem such as poor suction at duct pickup points may exist. In extreme cases (over 17" w.g.) filter bag and cage assemblies will be damaged. Check the following:

A. Differential pressure gauge

Check the differential pressure gauge or manometer and the tubing leading to the dust collector for proper operation. Disconnect the lines at the gauge or manometer and clear with compressed air. Look for loose fittings, cracked, broken, or pinched tubing. Make sure the gauge is zeroed or that the manometer is level, zeroed, and contains the correct fluid. See "Differential Pressure Gauge" installation section for detailed information.

B. Compressed air system

Inspect the compressed air system as follows to make sure that all of the filter bags are being cleaned:

1. If none of the solenoid valves are operating, check the timer using the "Troubleshooting the Timer" section.
2. Check the air pressure at the header. It should recover to 90-100 psig before each pulse. If not, check to make sure that the compressed air supply system is in good operating condition, correctly sized, and supply lines are not too small or restricted. Listen for the sound of compressed air flowing continuously through one or more rows of bags, an indication of a valve or valves "stuck" in the pulsing position. The usual causes for this condition are either a leak in the tubing to the solenoid pilot valve, or dirt in the solenoid and/or diaphragm valves.
3. Check that all solenoid pilot valves are firing in sequence by holding a finger over each solenoid exhaust port as described in Item 6A-6H in the "Start-up Checklist" section.

Note: Solenoid valves or diaphragm valves that do not operate properly may be serviced according to instructions in "Troubleshooting the Compressed Air System" section.



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C. Water or oil in compressed air

Inspect upper portions of the filter bags for dust caking, dampness, or oil. Any or all of these symptoms are indications of moisture or oil in the compressed air supply. Install equipment that will ensure a continuous supply of clean, dry, oil-free compressed air. See your compressor supplier for recommendations.

D. Bags loaded with dust

A condition known as blinding. If the dust is dry, see paragraphs 1-4; if the dust is wet, see paragraphs 5 and 6.

1. Dust not discharging from the hopper

Check hopper for over-loading or bridging across the dust discharge. Correct by repairing dust discharge equipment, replacing with higher capacity equipment, or installing hopper vibrators, etc. as required to keep the hopper clear.

2. Air flow too high

If the main air flow is too high to allow dust to drop off of the filter bags, an excessive pressure drop across the dust collector will result and dust will build up in the system. In many cases, this high pressure drop in turn leads to a reduction in the main air flow so that it is necessary to remove the dust accumulation from the bags (and the rest of the system) before measuring the main air flow volume.

Visually inspect the bags for heavy caking; if caking is evident, see the note below and take the necessary action to clean the bags. Next, measure the main air flow with a pitot tube or equivalent device and compare with the original volume for which the unit was designed. If the flow is too high, cut back the main fan to prevent a recurrence of the problem.

3. Particle size and dust load

If possible, compare the dust particle size and loading with the original design specifications. Finer dust may cause a higher pressure drop. Do not hesitate to call the factory, we have experience with many kinds of dusts.

4. Bags too tight

Bags that have shrunk on their cages may not flex sufficiently during the compressed air pulse to loosen caked dust. If the bags were cleaned or laundered, pull a bag tight around its cage; you should be able to "gather" a small fold of material between your fingers.



5. Water leaks

Inspect the dust collector housing and ductwork for holes, cracks, or loose gaskets where water could enter the collector.

6. Condensation

If moisture has been condensing inside the collector, check the dew point temperature of the incoming air stream. It may be necessary to insulate the collector and/or the ductwork leading to the collector to keep surface temperatures above the dew point and prevent condensation of the filter bags.

Note: Collectors that have had blinded or caked bags can possibly be put into service by running the pulsing air system for 15 to 30 minutes with a 10 second timer "off time" and without the main fan or blower. If the pressure drop is not lower when the main fan is started again, take the bags out of the collector and remove the caked dust by special dry-cleaning. Make sure the timer "off time" has been reset to specifications prior to re-start. Information pertaining to filter bag cleaning may be obtained by calling your Industrial Accessories Company Sales Representative.

II. Extremely Low Pressure Drop

A. Differential pressure gauge

Check the differential pressure gauge or manometer and the tubing leading to the dust collector as in Section I-A above.

B. Holes in the filter bags or bags incorrectly installed.

Inspect the filter bags as in III-A of this section.

C. Ductwork and dampers

Inspect the ductwork to and from the dust collector for air leaks or blockage. Make sure that any dampers in the system are correctly positioned to allow air to flow through the dust collector.

D. Leaks in the housing

Check the tube sheets (flat steel sheets from which the filter bags are suspended) and the dust collector housing for holes, cracks or loose gaskets that would permit air to bypass the dust collector or filter bags.



III. Continuous Flow of Dust in the Clean Air Exhaust (primary dusting)

A. Holes in the filter bags or bags incorrectly installed

Inspect the filter bag assemblies for holes, rips, tears, or excessive wear. Make sure that the filter bags were installed correctly according to the “Bag and Cage Installation” section, and that no bag/cage assemblies have dropped off.

B. Holes in the tube sheets or loose bag cup assemblies.

Check the tube sheets for holes, cracks, loose bolts, or loose bag cup assemblies (bottom bag removal only) that would permit dusty air to bypass the filter bags.

Note: This can be detected by using the “Detekto-Lite System” described in this manual.

IV. Puff of Dust in the Clean Air Exhaust After Each Pulse (secondary dusting)

Note: This condition is normal with new filter bags, and should stop after the first several hours of operation.

A. Air header pressure too high

Check air header pressure gauge. If the pulsing air pressure is over 100 psig, filter bags may flex excessively and allow fine dust to pass through the bag material.

B. Worn filter bags

Inspect the filter bags for wear. Thin bags may not stop fine dust when flexed by a compressed air pulse.

C. Residual dust

If dust has gotten into the clean air plenum because of a dropped or torn bag, hole in tube sheet, etc., the pulsing air may stir up the dust and allow it to escape into the clean air exhaust after each pulse. Residual dust may also be driven down inside filter bags by the pulsing air; if the filter bags are filled with several inches of dust, clean both the clean air plenum and the bag /cage assemblies to avoid further problems.



V. Short Filter Bag Life

This is often a complicated problem to diagnose, and we recommend calling the factory for advice. The following list may be helpful in performing some preliminary checks:

A. Temperature

Operating temperature above the recommended limit of the filter bag material.

B. Chemical attack

Bag material degrades due to attack from certain chemicals in the dust or gases in the air stream.

C. High moisture

High moisture content in the collector may cause certain filter bag material to shrink or degrade (more rapidly at elevated temperatures).

D. Localized abrasion

Abrasion of the bags at the top cuff due to incorrect installation.

E. Localized abrasion

Abrasion of the bags at the dusty air inlet: a dust impingement baffle may be required.

F. Bad cages

Corroded, rusted or broken filter cages can cause excessive bag wear. Stainless steel or coated cages are available.

G. Filter bags rubbing

Against each other, or against the interior of the dust collector at the bottom of the bag/cage assembly.



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